Jan. 6, 1953 W. J. BARGEN 2,624,392

SCHOOL DESK

Filed Dec. 23, 1949 7 Sheets-Sheet 1

Fig. 1

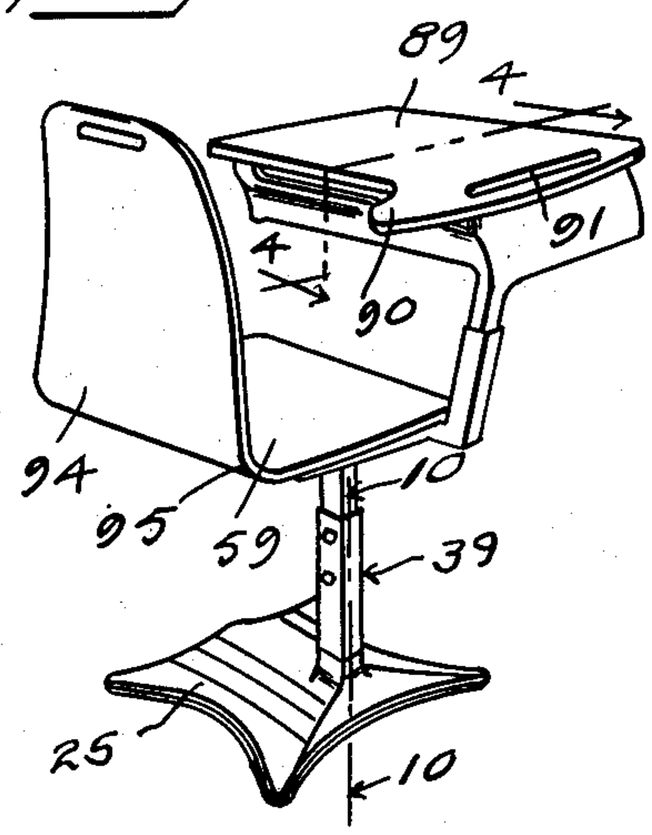


Fig. 17

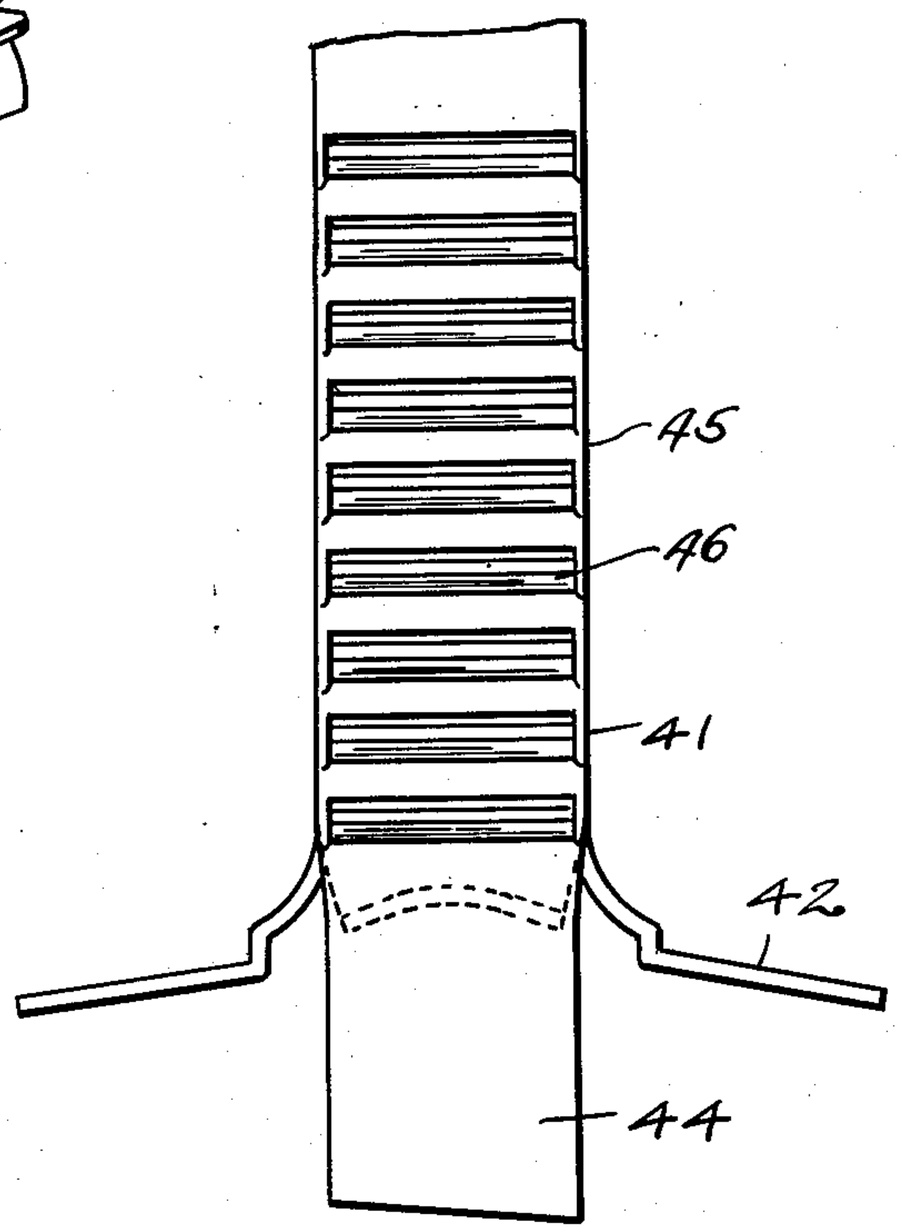


Fig. 18

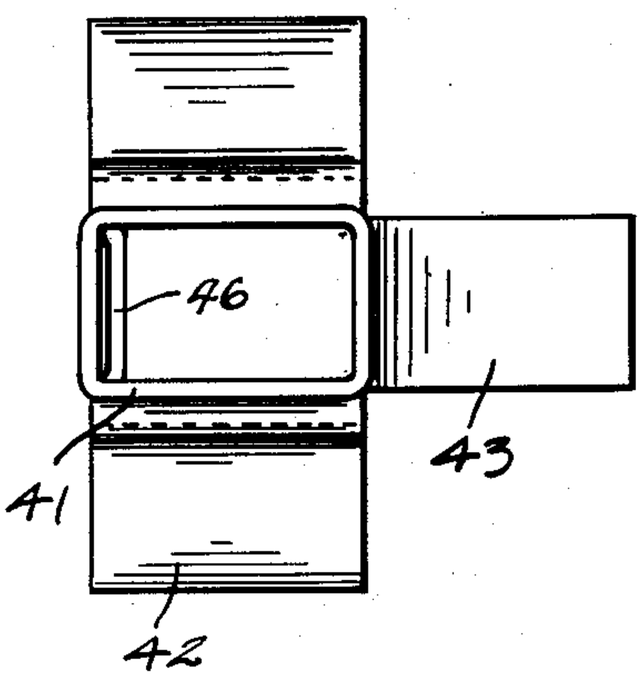
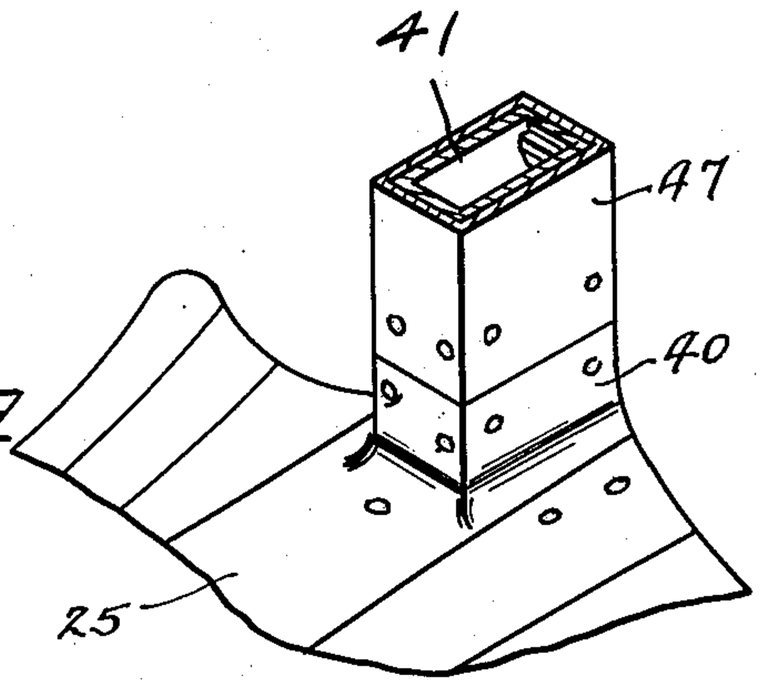


Fig. 19



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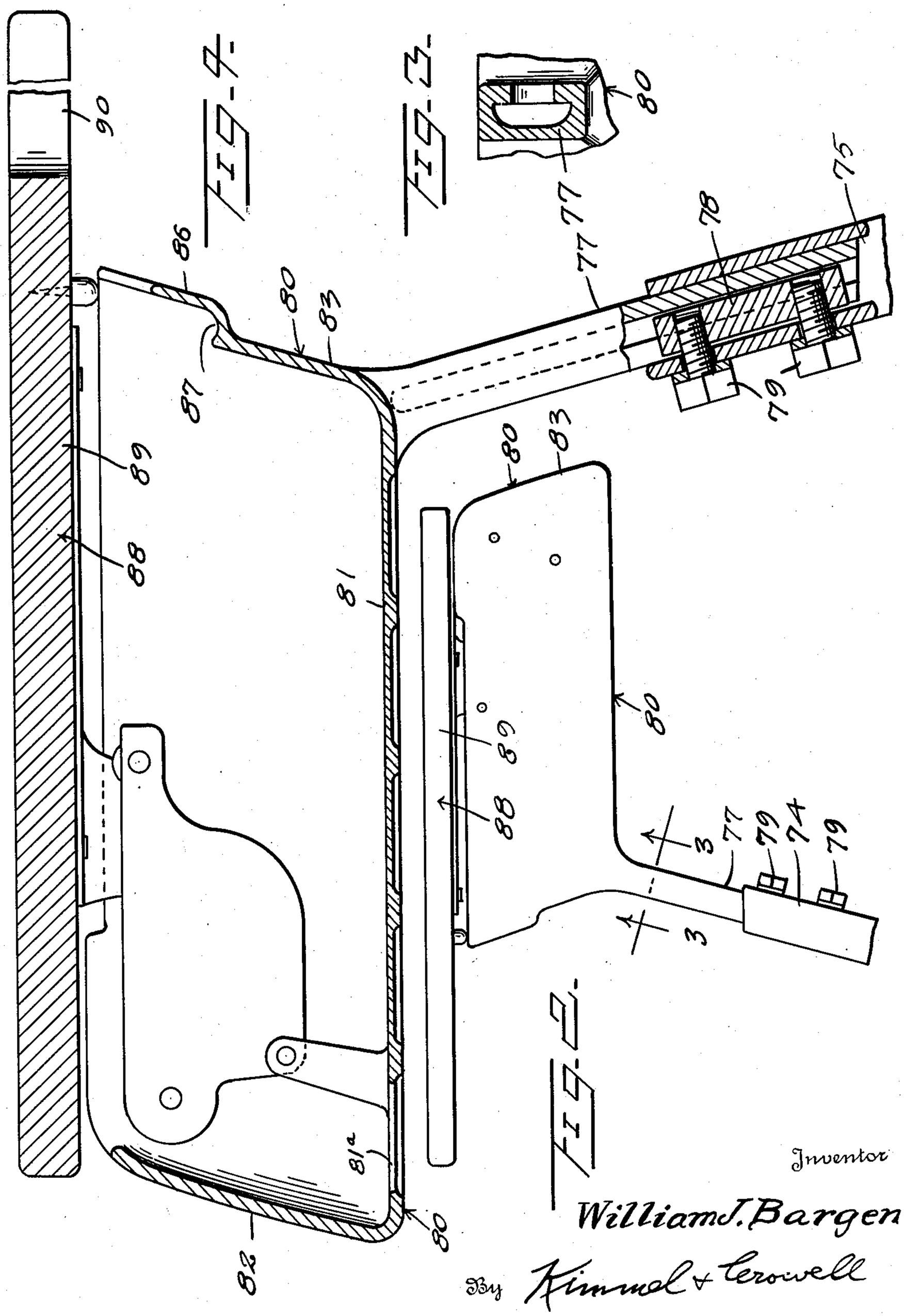

FIG. 4.

FIG. 3.

FIG. 2.

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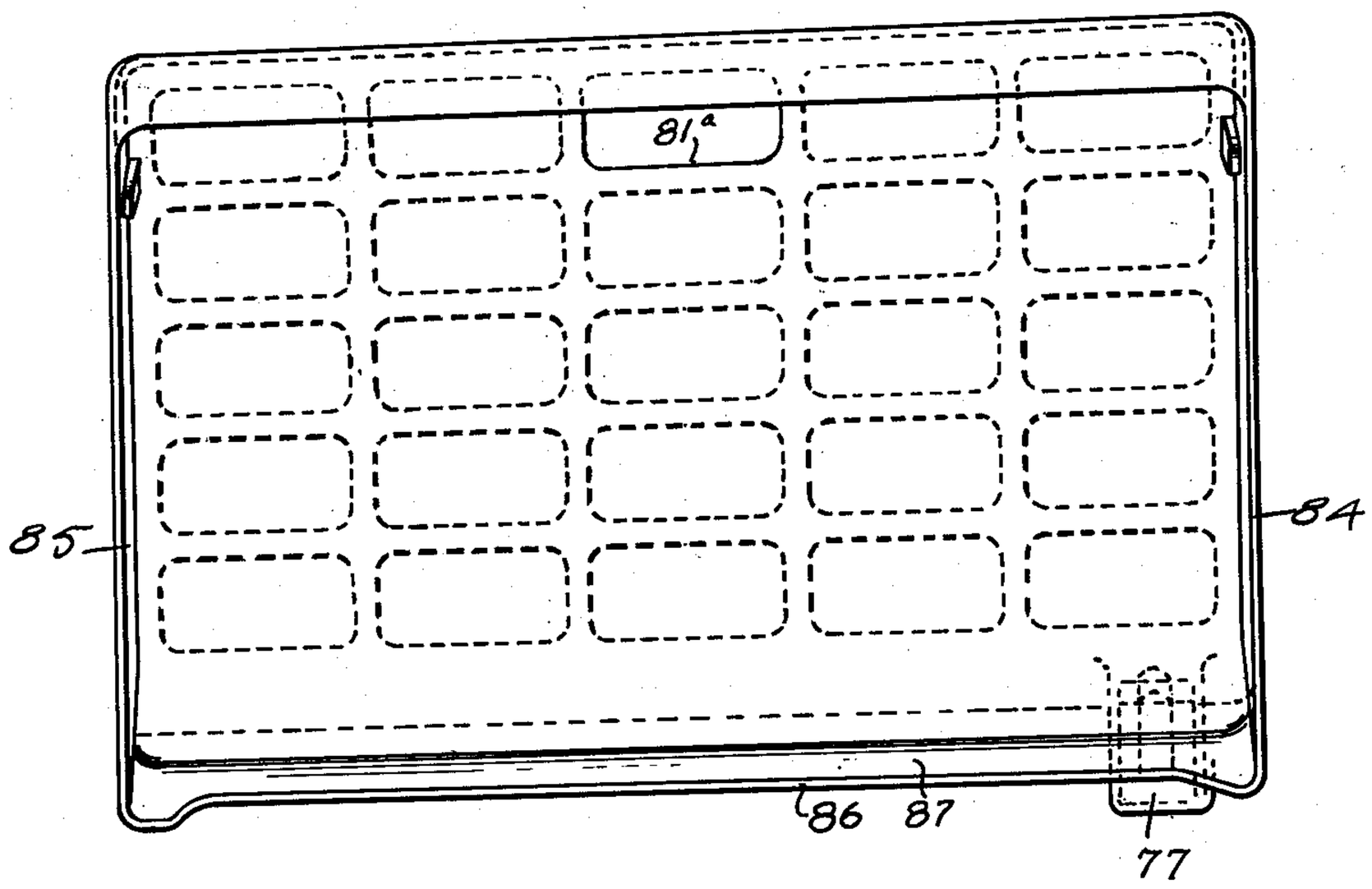
Fig. 5.



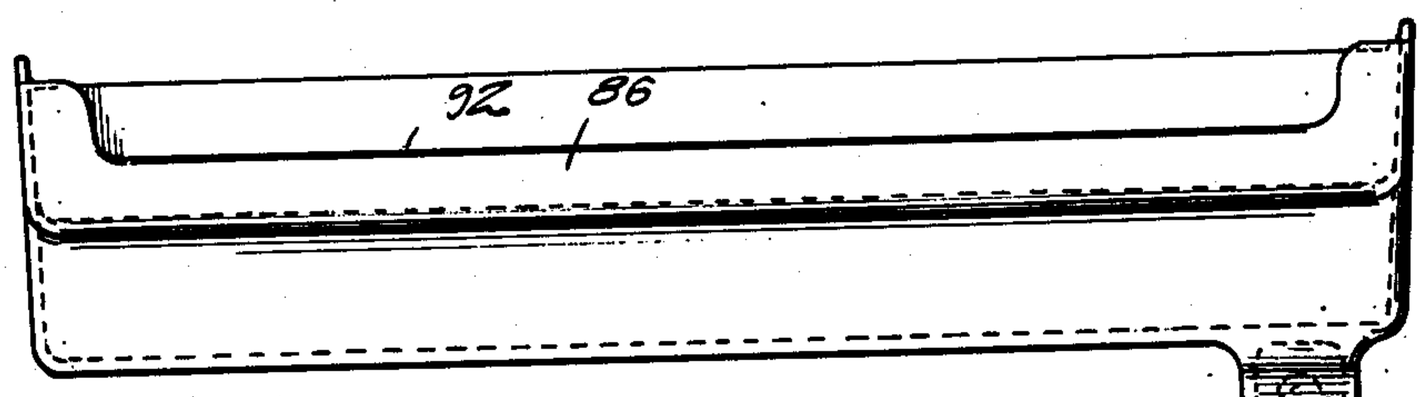


Fig. 6.

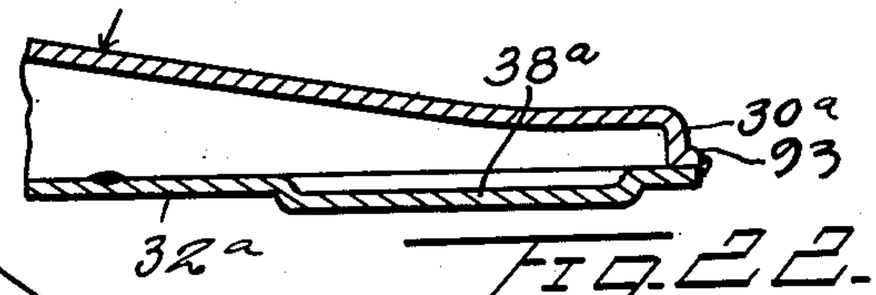


Fig. 22.

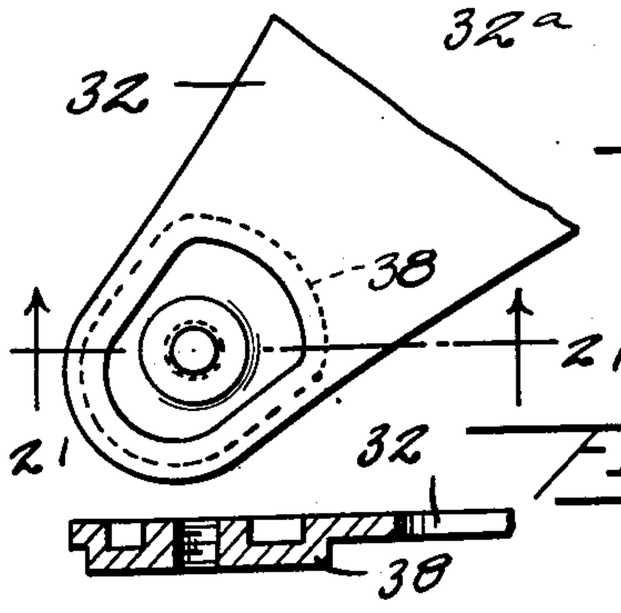


Fig. 20.

Fig. 21.

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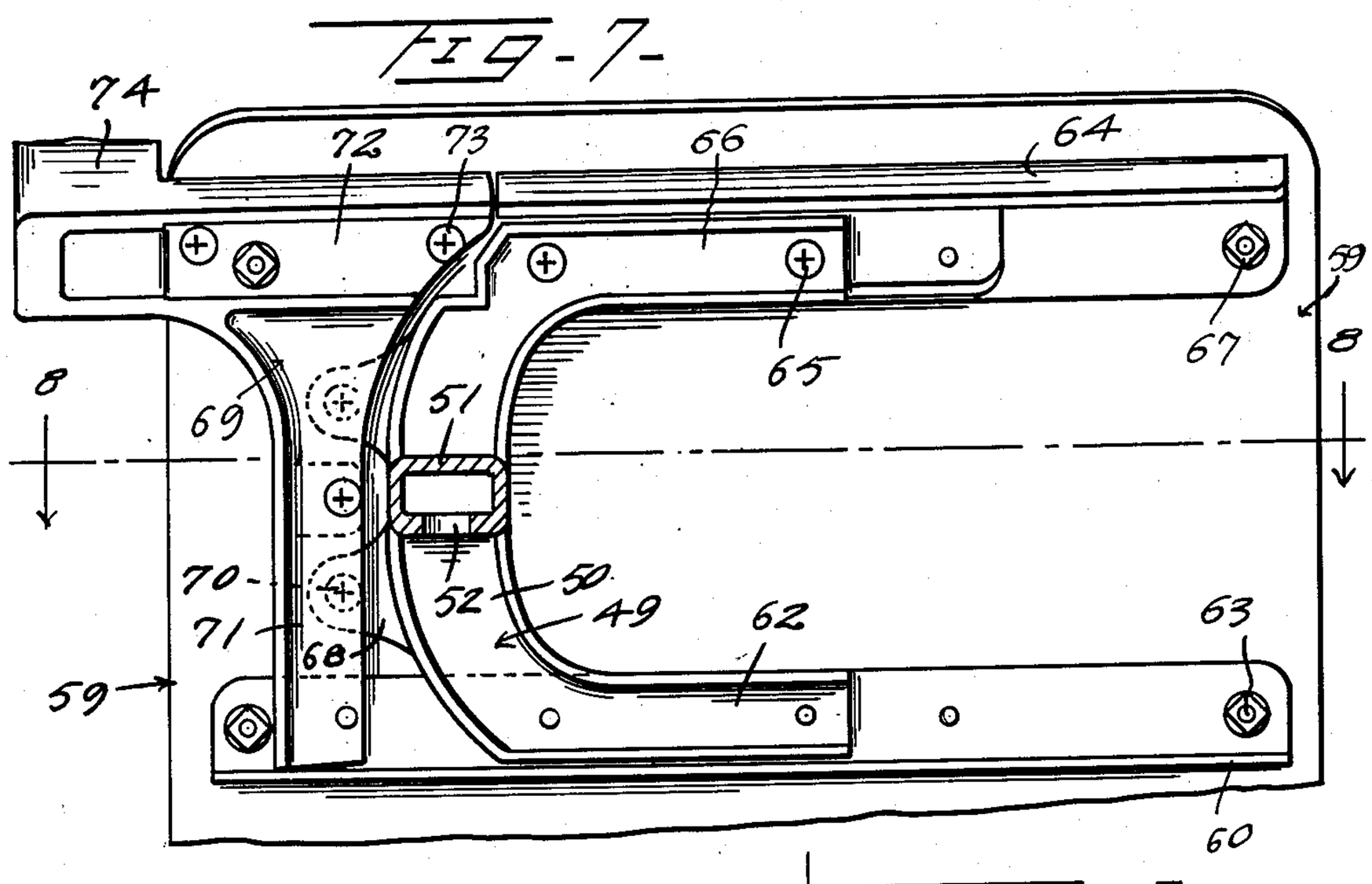
Fig-7-



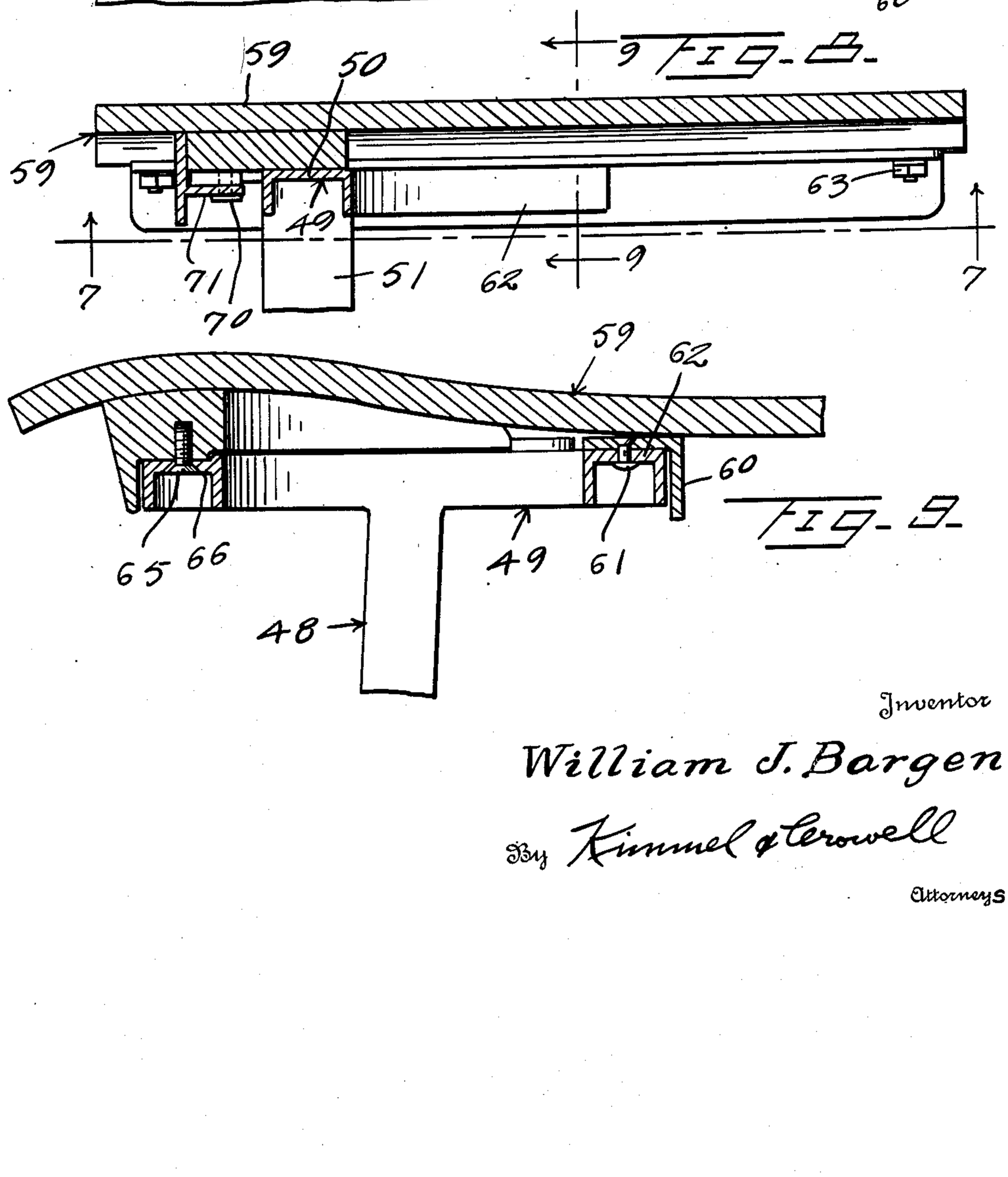


Fig-8-

Fig-9-

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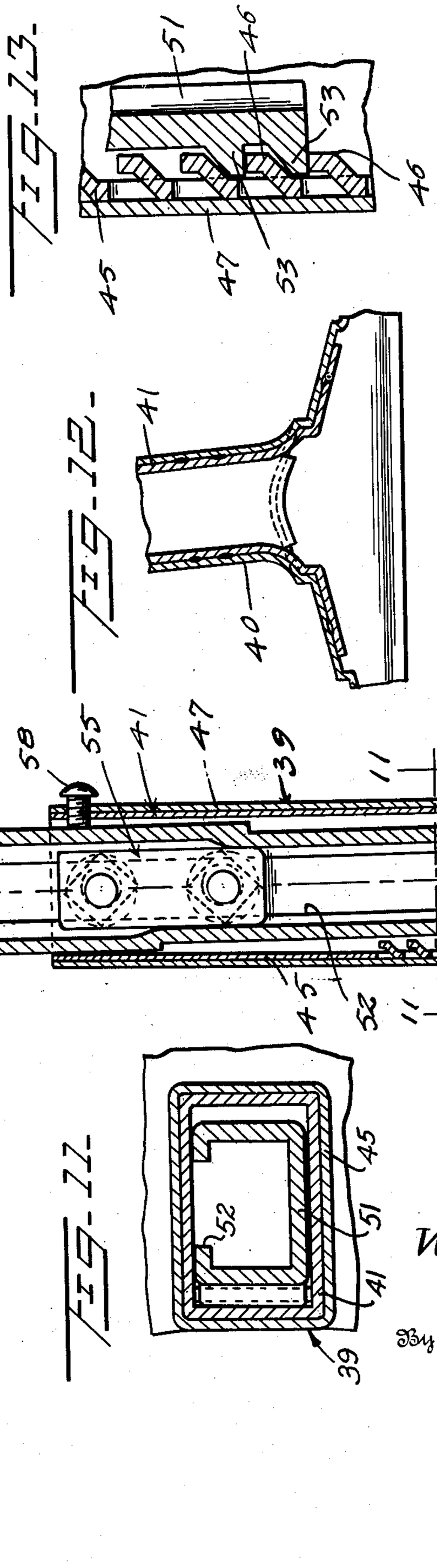

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SCHOOL DESK

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FIG-14.

FIG-12.

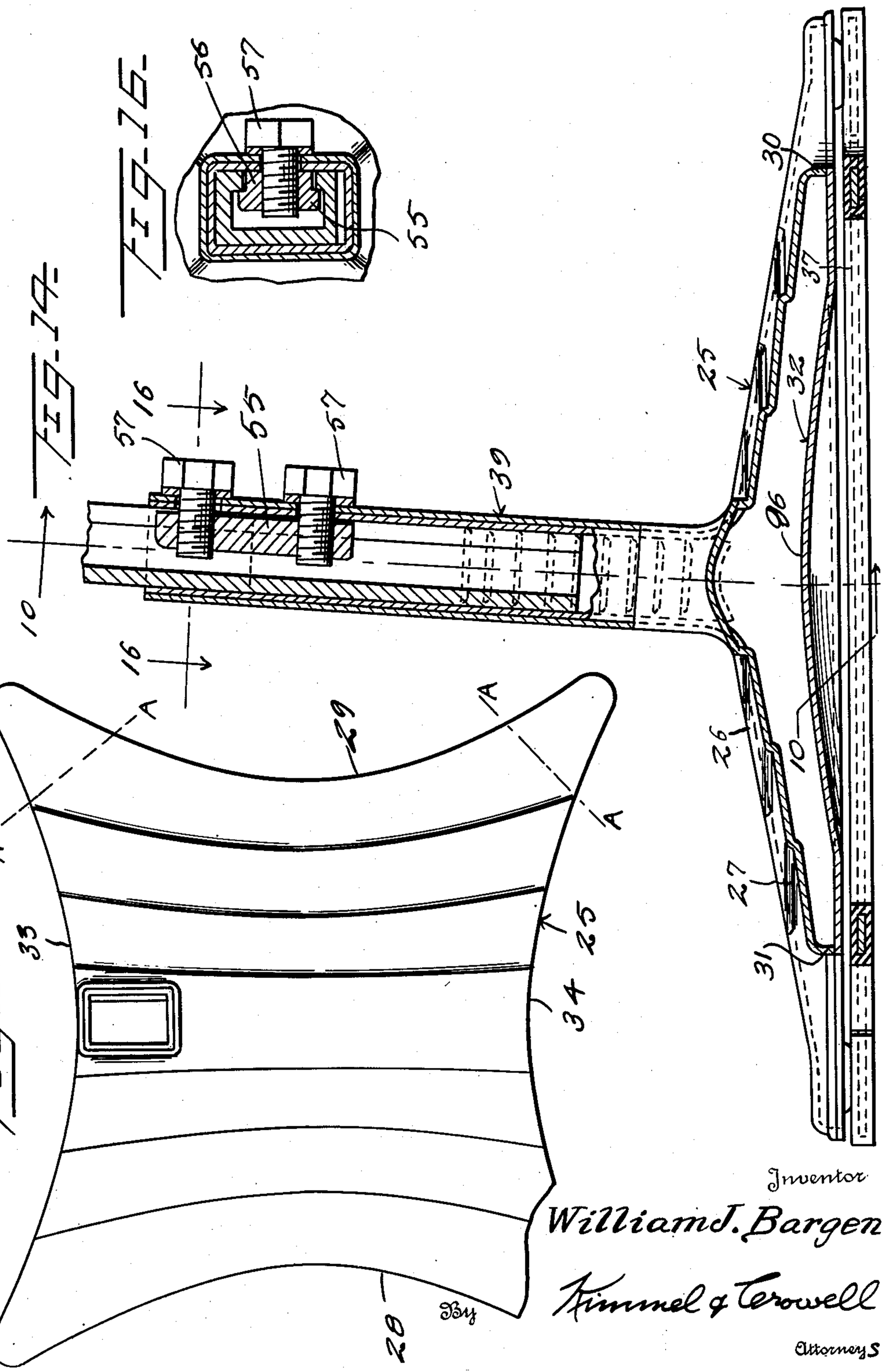

FIG-15.

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Fig. 23.

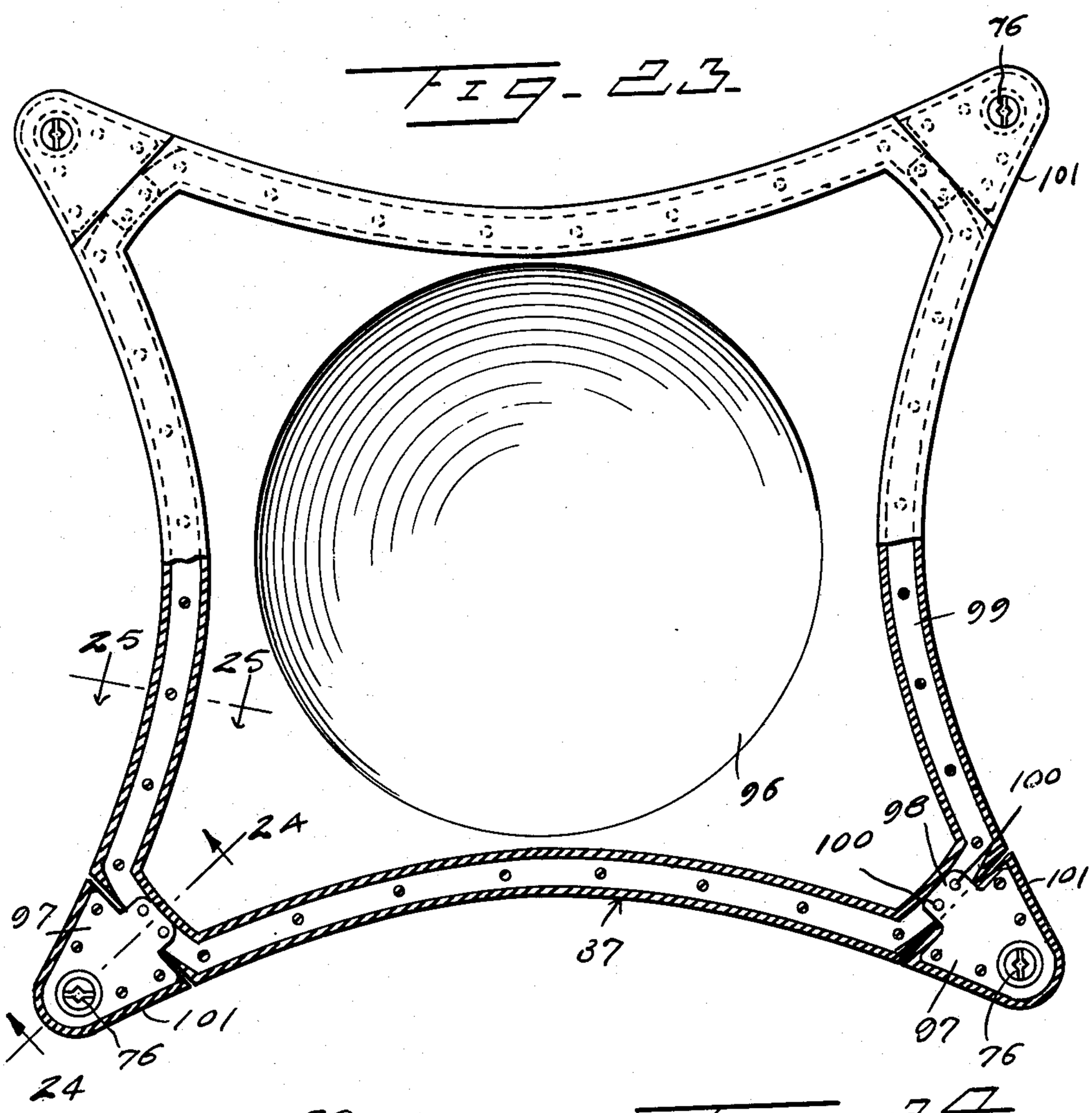


Fig. 24.

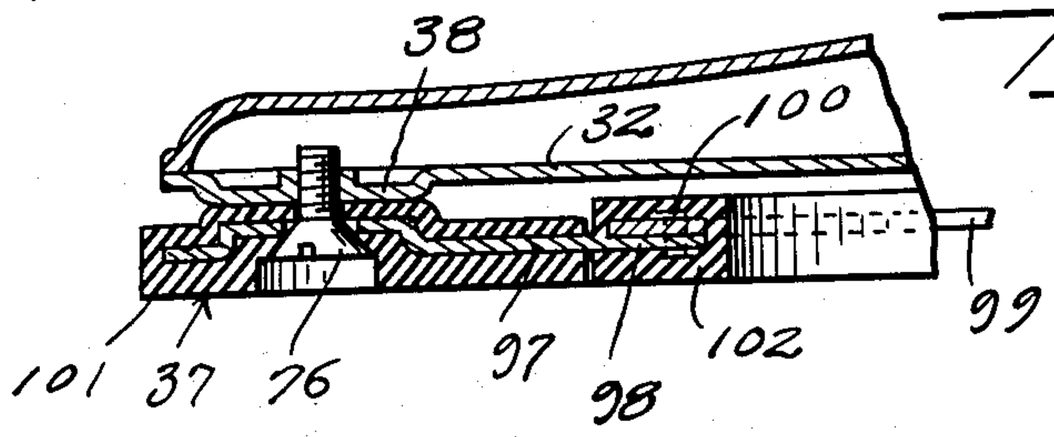
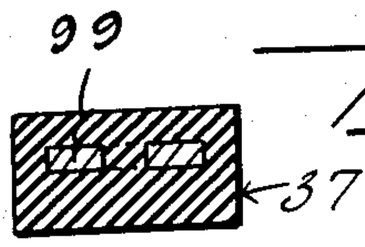


Fig. 25.



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Patented Jan. 6, 1953 2,624,392

UNITED STATES PATENT OFFICE

2,624,392

SCHOOL DESK

William James Bargen, Waukegan, Ill.

Application December 23, 1949, Serial No. 134,721

3 Claims. (Cl. 155—3)

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This invention relates to school desks.

An object of this invention is to provide a school desk embodying a balanced pedestal and base structure, with the latter formed of fabricated and stamped out sheet metal and including a weighted bottom plate.

Another object of this invention is to provide an improved supporting means for the seat.

A further object of this invention is to provide in a school desk, an improved book box which will eliminate the accumulation of dust or other small particles.

A further object of this invention is to provide an improved pedestal and base structure which can be used for school chairs or for school desks. Where the pedestal and base structure is used for school desks, the base is weighted to the desired amount to provide the necessary balance, whereas where the structure is used for chairs, the weight in the base may be left off or reduced.

A further object of this invention is to provide a desk structure which tends to cushion the user while sitting in the desk or while working on the top of the book box.

A further object of this invention is to provide a desk assembly wherein the base and pedestal may be formed out of one kind of metal, such as steel, and the remaining metal structure may be formed out of cast metal of a different characteristic, such as magnesium, aluminum or the like.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a perspective view of a desk constructed according to an embodiment of this invention.

Figure 2 is a fragmentary side elevation of the book box,

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 2,

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 1,

Figure 5 is a top plan view of the book box,

Figure 6 is a rear elevation of the book box,

Figure 7 is a fragmentary bottom plan of the seat and support, taken on the line 7—7 of Figure 8,

Figure 8 is a fragmentary sectional view taken on the line 8—8 of Figure 7,

Figure 9 is a fragmentary sectional view taken on the line 9—9 of Figure 8,

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Figure 10 is a fragmentary sectional view taken on the line 10—10 of either Figure 1 or Figure 14,

Figure 11 is a fragmentary sectional view taken on the line 11—11 of Figure 10,

Figure 12 is a fragmentary sectional view taken on the line 12—12 of Figure 10,

Figure 13 is a fragmentary vertical section on an enlarged scale, of the seat adjusting means,

Figure 14 is a fragmentary sectional view taken on the line 14—14 of Figure 10,

Figure 15 is a top plan view of the base and seat supporting standard,

Figure 16 is a fragmentary sectional view taken on the line 16—16 of Figure 14,

Figure 17 is a detail side elevation of the inner portion of the seat supporting standard,

Figure 18 is a top plan view of the standard shown in Figure 17,

Figure 19 is a fragmentary perspective view, partly in section, of the base and standard,

Figure 20 is a fragmentary top plan of the bottom plate for the base,

Figure 21 is a fragmentary sectional view taken on the line 21—21 of Figure 20,

Figure 22 is a fragmentary sectional view showing a modified form of base structure,

Figure 23 is a bottom plan partly in section of the base structure showing in detail the construction of the rubber shoe,

Figure 24 is a fragmentary sectional view taken on the line 24—24 of Figure 23,

Figure 25 is a sectional view taken on the line 25—25 of Figure 23.

Referring to the drawings and first to Figures 10 to 21 inclusive, the numeral 25 designates generally a base member which is of hollow construction and is formed of a substantially inverted V-shaped top wall 26 formed with ribs 27. The base 25 is preferably stamped out of sheet metal of substantial thickness and the front and rear portions of the base 25 are formed on a concave curvature as indicated at 28 and 29 respectively.

The front and rear portions of the base 25 are downturned to provide downwardly extending flanges 30 and 31 respectively, to which a bottom plate 32 is adapted to be secured as by welding or other suitable fastening means. Preferably the plate 32 is welded solid to the base 25 in the area outwardly from the dot and dash lines A—A (Figure 15) whereas plate 32 is tack welded at spaced intervals to base 25 between the dot and dash lines A—A so as to provide resiliency or springiness in the base. The plate 32 constitutes a weight means and may be of any desired thick-

ness to provide the necessary balance weight for the base 25, depending on the size of the seat and/or desk which is disposed above the base 25. Balance plate 32, as shown in Figures 10, 14 and 22, is upwardly dished or offset as indicated at 96 to provide for distribution of the weight to the outer portions of plate 32 and assure a noticeable resiliency in the base 25.

The base 25 is formed with concave opposite side portions 33 and 34, and the base 25 on the opposite sides thereof is extended vertically downward, as indicated at 35 and 36. A rubber or resilient shoe 37 may be secured to the bottom plate 32 and the shoe 37 at the points of the base structure is secured to the downwardly offset buttons or gliders 38 by means of screws 76 or the like.

The base 25 has extending upwardly therefrom a tubular standard generally designated as 39. The standard 39 is of fabricated sheet metal construction and includes a lower tubular member 40 which is struck upwardly from the base 25. The tubular member 40 is polygonal in cross section, and an inner tubular member 41 is fixedly secured within the tubular member 40 and extends upwardly therefrom.

The inner tubular member 41, as shown in Figures 17 and 18, is provided with a pair of wings 42, extending from the front and rear sides thereof, and is also provided with a laterally projecting wing 43. A vertically disposed wing 44 also extends downwardly from the tubular member 41 and the several wings 42 and 43 are disposed beneath the top wall 26 and are welded thereto. Vertical wing 44 is disposed in face abutting relation to the side wall 35. Wing 44 is adapted to be spot welded or the like. Wing 43 is disposed at the ridge or peak of the V-shaped top wall 26 and extends laterally therebeneath, as shown in Figure 10. One side wall 45 of the tubular member 41 is formed with inwardly offset and vertically spaced apart teeth 46, the purpose for which will be hereinafter described. An outer tubular member 47 is disposed about that portion of the inner tubular member 41 which projects upwardly from the tubular member 40 and is spot welded or otherwise firmly secured to the inner tubular member 41.

A seat structure generally designated as 48 is adjustably secured to the standard or upright 39 and comprises a U-shaped member 49 which has depending from the bight 50 thereof a tubular member 51. The tubular member 51 is formed with a vertically disposed slot 52 in one side thereof, and the lower end of the tubular member 51 is formed with teeth 53 which are engageable with selected ones of the teeth 46.

A T-shaped clamping member 55 is loosely disposed in the tubular member 51, having the stem or shank portion 56 thereof projecting through the slot 52. A pair of clamping bolts 57 are threaded into the clamping member 55 so that the tubular member 51 may be vertically adjusted. As shown in Figure 10, the tubular member 51 is substantially smaller than the distance between the front and rear walls of the standard 39 so that the tubular member 51 will be tilted a slight degree out of the vertical and secured in this position by means of a set screw 58. In order to vertically adjust the tubular member 51, clamp 55 is loosened and member 51 may then be raised or lowered, teeth 53 engaging with selected ones of the teeth 46 of standard 39.

A seat 59 is disposed above the U-shaped seat supporting member 49 and is secured at a point

spaced forwardly from the rear thereof, to an angle member 60. The angle member 60 is secured by fastening members 61 to the rear leg 62 of the U-member 49 and the end portions of the angle members 60 are secured by fastening means 63 to the bottom of the seat 59.

A relatively heavy front bar 64 is secured by fastening members 65 to the other or forward leg 66 of the U-member 49. The bar 64 is also secured by fastening means 67 to the lower side of the seat 59, adjacent the forward portion of the latter. The U-member 49 is provided on the outer side of the bight 50 thereof with a pair of laterally projecting ears 68 to which a book box supporting member generally designated as 69 is secured, by fastening members 70. The book box supporting member 69 includes a bar 71 having a substantially T-shaped forward portion 72 which is secured by fastening means 73 to an extended portion of the bar 64. The book box supporting member 69 includes an upwardly and forward inclined member 74 of tubular construction.

The stem 77 is clamped within the tubular member 74 by means of a clamping bar 78 which is engaged by clamping bolts 79 in the same manner as the stem or shank 51 of the seat supporting member 48 is secured in the standard 39. The shank 77 is formed integral with a book box generally designated as 80. The box 80 has a substantial amount of resiliency which results from a thin ribbed bottom 81 having a hand hole 81*a*, to which front and rear walls 82 and 83 respectively, and opposite side walls 84 and 85 respectively are secured. The front wall 82 is disposed on an acute angle with respect to the bottom wall 81 and the rear wall 83 is inclined on an obtuse angle with respect to the bottom 81. The rear wall 83, at a point between the upper and lower edges thereof, is formed with a rearwardly extending offset 86 which forms a groove or channel 87 within which pencils or the like are adapted to be positioned. The offsetting of the upper portion of the rear wall 83 not only serves the function of producing the pencil groove 87, but also offsets the lower portion of the rear wall forwardly so as to produce true comfort for the student through the provision of ample seating space.

A top 88 is hingedly secured to the side walls 84 and 85 and is adapted to lift upwardly from the rear thereof. The top 88 is formed of a substantially rectangular body 89 which is provided with a rearwardly projecting integral arm 90. A groove or depression 91 is formed in the top 88 for receiving pencils or other articles.

As shown in Figure 6, the offset wall member 86 is formed with a cut-out 92 to facilitate the placement or removal of books or other articles within the box 80. The provision of the grilled opening 81*a* in the bottom 81 provides a means whereby the interior of the box may be cleaned, and opening 81*a* also provides a means whereby the desk may be moved by grasping the box in the hole 81*a*.

Referring now to Figure 22, there is disclosed a slightly modified form of base structure wherein the base 25*a* is provided on the outer margins thereof with a depending flange 30*a* and a horizontally and outwardly extending flange 93 extends from a flange 30*a*. The bottom member 32*a* is welded or otherwise secured to the horizontal flange 93 in the same manner as bottom member 32 is secured to base 25. Glider buttons 38*a* are struck downwardly from the bottom plate 32*a* adjacent each corner thereof.

The seat **59** has formed integral therewith a back member **94** which extends upwardly therefrom and is longitudinally curved in a manner to conform to the curvature of the spine so that when a person is seated on the seat **59**, the person's back may rest against the back **94**. The connection between the seat **59** and the back **94** is a curved connection **95** integral with the seat and back which forms a resilient connection between the seat and back so that these two members may have relative movement with respect to each other. The connection of the seat supporting member **48** is forwardly of the rear portion of the seat **59** so that the seat **59** is free from the support at the rear thereof.

The shoe **37**, shown in greater detail in Figures 23 to 25, is formed of a metal frame comprising outer substantially triangular plates **97** having inwardly projecting tongues **98**. Longitudinally curved links **99** are secured at the opposite ends thereof by fastening means **100** to tongues **98**. Plates **97** are embedded in a rubber covering **101**, and links **99** are embedded in a rubber covering **102**. In certain instances the shoes **37** may be omitted, and in such instances the gliders **38** will contact the floor.

In the use and operation of this seat structure, the seat member comprising the seat **59** and the back **94**, with the book box attached thereto, may be vertically adjusted by loosening the fastening members **57** and clamping member **55**. The stem **51** may then be either raised or lowered by rocking this stem forward and backward to provide for engagement of the teeth **53** with the desired teeth **46** of the lower stem or column **39**. The book box **80** may also be vertically adjusted in the same manner as the seat structure, by loosening the clamping member **78**. The book box with the supporting means therefor is preferably formed out of cast material, whereas the base with the supporting standard is preferably formed out of pressed sheet metal.

The seat supporting standard **39** is disposed at one side of the base **25** so that a child in an adjacent seat may place its feet on the base. Furthermore, the provision of the support for the book box at one side of the seat provides a convenient means whereby a child may readily move into and out of the seat from one side thereof.

I do not mean to confine myself to the exact details of construction, herein disclosed, but claim all variations falling within the purview of the appended claims.

What I claim is:

1. In a school desk having a seat, a book box disposed above said seat, and supporting means for said box, said box being formed of front and rear walls, opposite end walls, a bottom wall, said rear wall including a rearwardly offset portion forming an article receiving channel between the upper and lower edges thereof said offset portion having an elongated cut-out to form an entrance to the box.

2. In a school desk a book box comprising a pair of vertical end walls, front and rear walls disposed on a downward and forward inclination, said rear wall including a forwardly offset lower portion, an upper portion and a transversely curved connecting member between said upper and lower portions forming a pencil groove, a depending supporting shank carried by said box adjacent a rear corner thereof, and a resilient bottom integral with said end, front and rear walls, said bottom including crossed reinforcing ribs.

3. A book box for disposing beneath a desk top comprising a member formed with vertical opposite end walls, a bottom wall, front and rear walls disposed on a downward and forward inclination, and a downwardly and rearwardly inclined supporting arm projecting from one of said side walls, said rear wall having a rearwardly offset upper portion parallel with the lower portion thereof and forming an article receiving channel between said upper and lower portions, said offset upper portion of said rear wall having a relatively long horizontal cutout extending downwardly from the upper edge thereof to thereby provide a means whereby articles may be placed in or removed from said channel with the top in normal operative position.

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